

|                                    |   |                                   |
|------------------------------------|---|-----------------------------------|
| <b>The Lane Construction Corp.</b> | ) | <b>Departmental</b>               |
| <b>Penobscot County</b>            | ) | <b>Findings of Fact and Order</b> |
| <b>Hermon, Maine</b>               | ) | <b>Air Emission License</b>       |
| <b>A-860-71-A-N</b>                | ) |                                   |

After review of the air emission license application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## **I. REGISTRATION**

### **A. Introduction**

The Lane Construction Corporation (Lane), located in Hermon, Maine has applied for an Air Emission License, permitting the operation of emission sources associated with their new portable asphalt drum mix plant.

### **B. Emission Equipment**

#### **Asphalt Plant:**

| <b>Equipment</b>     | <b>Process Rate<br/>(tons/hour)</b> | <b>Design Capacity</b> | <b>Max. Firing Rate/<br/>Fuel Type</b>                         | <b>Control<br/>Device</b> |
|----------------------|-------------------------------------|------------------------|--|---------------------------|
| 66 Rotary<br>Dryer   | 200                                 | 103.5 MMBtu/hr,        | 740 gal/hr, #2 fuel & specification<br>waste oil, 0.35% Sulfur | Wet Venturi<br>Scrubber   |
| H1 Hot Oil<br>Heater | -                                   | 1.5 MMBtu/hr           | 11 gal/hr, #2 fuel, 0.35% Sulfur,<br>16 gal/hr, natural gas    | none                      |

#### **Associated Diesel Units:**

| <b>Source ID</b> | <b>Max. Capacity</b> | <b>Max. Firing Rate</b> | <b>Fuel Type</b>      |
|------------------|----------------------|-------------------------|-----------------------|
| Generator 1      | 1.6 MMBtu/hr         | 11.4 gal/hr             | #2 Fuel, 0.35% Sulfur |
| Generator 2      | 0.45 MMBtu/hr        | 3.2 gal/hr              | #2 Fuel, 0.35% Sulfur |

### **C. Application Classification**

This application for Lane is a new emission source. A new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The emissions for the new source are determined by the maximum future license allowed emissions. This source is determined to be a minor new source and has been processed as such.

## **II. BEST PRACTICAL TREATMENT**

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Bureau of Air Quality regulations. BPT for new units consists of meeting Best Available Control Technology (BACT). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

### **A. Asphalt Plant**

BACT for the dryer is the firing of #2 fuel oil and specification waste oil, with a sulfur content not to exceed 0.35% by weight. Fuel use in the dryer shall not exceed 500,000 gal/year based on a 12 month rolling total.

SO<sub>2</sub> emission limits were calculated by mass balance assuming all the sulfur in the fuel was converted to SO<sub>2</sub>. VOC, NO<sub>x</sub> and CO emissions for the asphalt plant are based on EPA AP-42 factors dated 12/00. Chapter 103 of the Departments Rules regulates particulate matter resulting from fuel burning. The PM<sub>10</sub> limits are derived from the PM limits. The dryer was manufactured in 1980 and is therefore subject to EPA New Source Performance Standards (NSPS) Subpart I for Hot Mix Asphalt Facilities manufactured after June 11, 1973.

To meet the requirements of BACT and NSPS for the control of particulate matter (PM) emissions from the asphalt plant dryer shall vent to a wet venturi scrubber. Opacity from the asphalt plant wet venturi scrubber is limited to no greater than 20% on a 6-minute block average basis.

The performance of the wet venturi scrubber shall be constantly monitored by either a water flow meter and a pressure drop gauge or personnel with a current EPA Method 9 visible emissions certification at all times the dryer is operating. BACT includes maintaining a maintenance log for the wet venturi scrubber and recording the date and reasons for all emission upsets as well as all maintenance procedures. BACT also includes conducting weekly nozzle inspections and logging all inspections.

Based on the asphalt plant process rate, the average particulate matter emission rate from the asphalt plant wet venturi scrubber is limited to 0.03 grs/dscf (9.25 lb/hr). Emissions from the wet venturi scrubber shall not exceed the following:

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| <u>Pollutant</u> | <u>grs/dscf</u> | <u>lb/hr</u> | <u>TPY</u> |
|------------------|-----------------|--------------|------------|
| PM               | 0.03            | 9.25         | 3.1        |
| PM <sub>10</sub> | 0.03            | 9.25         | 3.1        |
| SO <sub>2</sub>  | -               | 36.48        | 12.3       |
| NO <sub>x</sub>  | -               | 11.00        | 3.7        |
| CO               | -               | 26.00        | 8.8        |
| VOC              | -               | 6.40         | 2.2        |

Fugitive particulate emissions from the asphalt plant shall be controlled to prevent visible emissions in excess of 10% opacity on a 6-minute block average basis.

The asphalt plant is subject to the NSPS performance testing and reporting requirements in 40 CFR Part 60 Subparts A and I . These subparts contain requirements for the asphalt plant start up including Method 5 and Method 9 performance tests within 60 days of achieving the maximum production rate of this plant, but no later than 180 days after startup.

Petroleum contaminated soil processing cannot exceed 10,000 cubic yards per year without prior approval from the Department. Lane shall only process gasoline and #2 fuel oil contaminated soil material without prior approval from the Department.

**B. Hot Oil Heater**

The hot oil heater is part of the asphalt plant and maintains the temperature of oil added to the aggregate. The heater is dual fueled, capable of firing either #2 fuel oil or liquid petroleum gas, and has a maximum design heat input rate of 1.5 MMBtu/hr. BACT for the heater is the firing of #2 fuel with a sulfur content not to exceed 0.35% by weight. Fuel used by the heater is to be counted towards the fuel cap for the asphalt plant. Visible emissions from the hot oil heater shall not exceed 20% opacity on a 6-minute block average basis.

**C. Diesel Generators**

Diesel generators 1 and 2 are used to power the asphalt plant and have a maximum design capacity of 1.6 MMBtu/hr and 0.45 MMBtu/hr respectively. BACT for Generator 1 and 2 is the firing #2 fuel with a sulfur content not to exceed 0.35% by weight. Fuel use for Diesel Generators 1 and 2 combined shall not exceed 40,000 gal/year on a 12 month rolling total basis.

VOC, NO<sub>x</sub> and CO emissions for Generator 1 and 2 are based on EPA AP-42 factors dated 10/96 for diesel units less than 600hp. Chapter 103 regulates PM emission limits. The PM<sub>10</sub> limits are derived from the PM limits. SO<sub>2</sub> emission

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limits were calculated by mass balance assuming all the sulfur in the fuel was converted to SO<sub>2</sub>. Emissions from these units shall not exceed the following:

| <u>Pollutant</u> | <u>Diesel 1<br/>lb/hr</u> | <u>Diesel 2<br/>lb/hr</u> |
|------------------|---------------------------|---------------------------|
| PM               | 0.19                      | 0.05                      |
| PM <sub>10</sub> | 0.19                      | 0.05                      |
| SO <sub>2</sub>  | 0.56                      | 0.16                      |
| NO <sub>x</sub>  | 7.06                      | 1.98                      |
| CO               | 1.52                      | 0.43                      |
| VOC              | 0.56                      | 0.16                      |

To meet BACT visible emission requirements, generator 1 and 2 shall each not exceed an opacity of 20% on a 6 minute block average basis, except for no more than 2 six minute block averages in a continuous 3-hour period.

**D. Stock Piles and Roadways**

BACT for all potential sources of fugitive PM emissions, including material stockpiles and unpaved roadways, shall be controlled by wetting with water, with calcium chloride, or other methods as approved by the Bureau of Air Quality to prevent visible emissions in excess of 10% opacity, on a 3 minute block average basis.

**E. Facility Emissions and Fuel Use Limits**

Lane is restricted to the use of no greater than 500,000 gal/year of #2 fuel oil and specification waste oil (12 month rolling total), with a sulfur content not to exceed 0.35% by weight in the asphalt kiln and associated hot oil heater. Lane is restricted to the use of no greater than 40,000 gal/year of #2 fuel (12 month rolling total), with a sulfur content not to exceed 0.35% by weight in Generator 1 and 2. Based on these fuel use limits emissions for the facility shall be limited to the following:

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)

| <u>Pollutant</u> | <u>Tons/Year</u> |
|------------------|------------------|
| PM               | 3.5              |
| PM <sub>10</sub> | 3.5              |
| SO <sub>2</sub>  | 13.3             |
| NO <sub>x</sub>  | 16.1             |
| CO               | 11.5             |
| VOC              | 3.2              |

### **III. AMBIENT AIR QUALITY ANALYSIS**

According to the Maine Regulation Chapter 115, the level of air quality analyses required for a minor new source shall be determined on a case-by-case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

#### **ORDER**

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-860-71-A-N, subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.

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- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. \ 353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
  - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - b. pursuant to any other requirement of this license to perform stack testing.
  - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - (iii) submit a written report to the Department within thirty (30) days from date of test completion.

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- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

**(16) Asphalt Plant**

- a. Emissions from the hot mix asphalt plant shall vent to a wet venturi scrubber, and all components of the asphalt plant shall be maintained so as to prevent PM leaks.
- b. The performance of the wet venturi scrubber shall be constantly monitored by either one of the following at all times the dryer is operating:
  1. Water flow meter and pressure drop gauge –
    - i. When the water flow meter signals a water flow rate 10% less than the water flow based on the manufacturers nozzle rating, Lane shall take corrective action within 24 hours, or immediately if opacity exceeds 20%. When the pressure drop gauge indicates a 20% deviation from normal operation established during the most recent performance test, the facility shall take corrective action within 24 hours, or immediately if opacity exceeds 20%.
    - ii. The source shall maintain an operation log recording water flow rate to the spray nozzles and the pressure drop across the scrubber twice per day on days of operation.
  2. Personnel with a current EPA Method 9 visible emissions certification –
    - i. When the opacity exceeds 20%, the asphalt plant is operating with insufficient control and corrective action shall be taken immediately.
- c. Lane shall maintain a maintenance log for the wet venturi scrubber and shall record the date and reasons for all emission upsets as well as all routine and non-routine maintenance procedures. Lane shall complete weekly routine nozzle inspections and log all inspections. The maintenance and inspection logs shall be kept on-site at the asphalt plant location.
- d. Opacity from the wet venturi scrubber shall not exceed 20% on a 6-minute block average basis.
- e. Fugitive PM emissions from the asphalt operation shall be controlled so as to prevent visible emissions in excess of 10% opacity on a 6-minute block average basis.
- f. A log documenting fuel use, including receipts showing the type and quantity of fuel delivered and its sulfur content, for the asphalt dryer and hot oil heater shall be maintained on a monthly as well as on a twelve month rolling total basis. A log shall also be maintained recording the quantity and analyzed test results of all specification waste oil fired in the dryer. These logs shall be kept at the location of the asphalt plant.



- g. The asphalt dryer shall be limited to a maximum of 103.5MMBtu/hr heat input. Lane shall be limited to the use of 500,000 gal/year of #2 fuel oil and specification waste oil (12 month rolling total), with a sulfur content not to exceed 0.35% by weight in the dryer or hot oil heater. Emissions from the wet venturi scrubber shall not exceed the following:

| <u>Pollutant</u> | <u>grs/dscf</u> | <u>lb/hr</u> | <u>TPY</u> |
|------------------|-----------------|--------------|------------|
| PM               | 0.03            | 9.25         | 3.1        |
| PM <sub>10</sub> | 0.03            | 9.25         | 3.1        |
| SO <sub>2</sub>  | -               | 36.48        | 12.3       |
| NO <sub>x</sub>  | -               | 11.00        | 3.7        |
| CO               | -               | 26.00        | 8.8        |
| VOC              | -               | 6.40         | 2.2        |

- h. The licensee shall not process more than 10,000 cubic yards of petroleum contaminated soils per year without prior approval from the Department. The material shall be handled in accordance with the requirements of the Bureau of Remediation and Waste Management.
- i. Without prior approval from the Department, the licensee shall only process gasoline and #2 fuel oil contaminated soil material.
- j. The licensee shall not process contaminated soils which are classified as hazardous waste or which have unknown contaminants.
- k. When processing petroleum contaminated soils, the licensee shall maintain records which specify the quantity and type of contaminant in the soil, the origin of the soil and the contaminant, and the characterization of the contaminated soil. In addition, when processing contaminated soil, the licensee shall maintain records of processing temperature, asphalt feed rate, fuel use, soil moisture content, and dryer throughput, on an hourly basis.

(17) **Hot Oil Heater**

- a. The hot oil heater can fire liquid petroleum gas or #2 fuel oil with a sulfur content not to exceed 0.35% by weight. Fuel used by the heater is to be counted towards the fuel cap for the asphalt plant and shall be included in calculating monthly and twelve month rolling totals.
- b. Visible emissions from the hot oil heater shall not exceed 20% opacity on a 6-minute block average basis.

(18) **Diesel Generators**

- a. Total fuel use in Generator 1 and 2 combined shall not exceed 40,000 gal/year of #2 fuel, based on a 12 month rolling total, with a maximum sulfur content not to exceed 0.35% by weight.
- b. A log documenting fuel use, including receipts showing the type and quantity of fuel delivered and its sulfur content, for the diesel generators shall be

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maintained on a monthly as well as on a twelve month rolling basis. The log shall be kept at the location of the asphalt plant.

- c. Emissions from these units shall not exceed the following:

| <u>Pollutant</u> | <u>Diesel 1</u><br><u>lb/hr</u> | <u>Diesel 2</u><br><u>lb/hr</u> |
|------------------|---------------------------------|---------------------------------|
| PM               | 0.19                            | 0.05                            |
| PM <sub>10</sub> | 0.19                            | 0.05                            |
| SO <sub>2</sub>  | 0.56                            | 0.16                            |
| NO <sub>x</sub>  | 7.06                            | 1.98                            |
| CO               | 1.52                            | 0.43                            |
| VOC              | 0.56                            | 0.16                            |

- d. Generator 1 and 2 shall each not exceed an opacity of 20% on a 6 minute block average basis, except for no more than 2 six minute block averages in a continuous 3-hour period.

**(19) Stockpiles and Roadways**

Potential sources of fugitive PM emissions including material stockpiles and unpaved roadways shall be controlled by wetting with water, with calcium chloride, or other methods as approved by the Bureau of Air Quality to prevent visible emissions in excess of 10% opacity, on a 3 minute block average basis.

**(20) Equipment Relocation**

- a. Lane shall notify the Bureau of Air Quality, by a written notification at least 10 days in advance, prior to relocation of any equipment carried on this license. The notification shall be sent to:

Attn: Relocation Notice  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

The notification shall include the address of the equipment's new location and the license number pertaining to the relocated equipment.

- b. Written notification shall also be made to the municipality where the equipment will be relocated, except in the case of an unorganized territory where notification will be made to the respective county commissioners.

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- (21) Lane shall comply with NSPS performance testing and reporting requirements in 40 CFR Part 60 Subparts A, and I. This requires, in part, that Lane complete Method 5 and Method 9 performance tests within 60 days of achieving the maximum production rate of this asphalt plant, but no later than 180 days after startup of the asphalt plant. Lane shall submit a test notice to the regional inspector at least 30 days prior to the performance test.

Lane shall comply with the notification and record keeping requirements of 40 CFR Part 60.7.

- (22) Lane shall pay the annual air emission license fee within 30 days of *April 30th* of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.
- (23) Lane shall keep a copy of this Order on site, and have the operator(s) be familiar with the terms of this Order.
- (24) The term of this order shall be for five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS      DAY OF      , 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R.GALLAGHER, COMMISSIONER

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/11/2003

Date of application acceptance: 3/18/2003

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This order prepared by Jeffrey C. Kalinich, Bureau of Air Quality.